GUEST EDITORIAL

The International Union for Conservation of Nature and Natural Resources (IUCN)

From its inception in 1948, the International Union for Conservation of Nature and Natural Resources has sought to establish a truly scientific basis for Nature conservation throughout the world. This was necessary because the conservation movement started rather as an emotional trend, primarily comprised of people who were concerned, mostly for personal and/or local-interest reasons, with particular pet species of animals or plants. For many persons conservation was mainly a hobby, and this is an aspect which we need to maintain. But as IUCN became established and started mobilizing the scientific community world-wide through its commissions and special task-forces, it began to build the scientific and quantitative basis of information for conservation.

The effective thrust of this mobilization by IUCN is made very clear for instance by the widely-used *Red Data Books* concerning species of animals and plants that are threatened with extinction, and by the gradual establishment of a data-base for protected areas and national parks. This effort has developed into technically advanced centres in Cambridge and Kew (both in southern England, UK) where IUCN maintains computerized, updated information about species and protected areas world-wide. These developments are important *inter alia* in constituting a scientific and qualitative (and sometimes even quantitative) basis for arguing the case of conservation.

Three Main Levels of Activity

Since its establishment, IUCN has worked on many fronts but at three principal levels: international, national, and local. First, at the international level, I think IUCN was instrumental—or at least played a very important role—in drafting and promoting a number of international conventions and treaties, including the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), the World Heritage Convention, the Ramsar Convention on Wetlands of International Importance Especially as Waterfowl Habitat, the Migratory Species Convention, and the Charter for Nature (which was adopted by the United Nations in 1982). In this regard as well, IUCN's Environmental Law Centre in Bonn, West Germany, and its Commission on Environmental Law, play an important role. The Centre maintains an extensive computerized library of environmental legislative literature and court cases from over 140 countries, providing a strong foundation for the Union's activities in environmental legislation. Also, IUCN has its part in helping with the establishment of international programmes—such as, for example, the Regional Seas Programme, which continues to be one of the United Nations Environment Programme's major achievements world-wide.*

IUCN, by its complex yet very interesting structure (having among its membership both state and government agencies on one hand and nongovernmental scientific bodies and activist groups on the other**, has played a role in mobilizing world opinion and bringing pressure to achieve action in conservation. For instance, IUCN played a role in regard to the whaling problem. As we may remember, the United Nations Conference on the Human Environment, held in Stockholm in 1972, called for a moratorium to be established against all commercial whaling. This did not come into force until a positive decision of the International Whaling Commission was taken in 1982; but throughout the intervening decade, IUCN played its role with other conservation institutions world-wide to bring this very important decision to its proper conclusion. IUCN, either alone or with its fund-raising partner the World Wildlife Fund (WWF), made hundreds of representations to heads of state and government agencies calling for this and other conservation actions to be taken at the national level which, of course, makes up the world. This was possible through IUCN's access to States and Governments which are among its members.

At the above and lower levels, IUCN has provided assistance wherever possible, when requested by government agencies and groups, towards supporting conservation down to and including the fundamental or field level. Very widely in action at the group or field level, IUCN is a partner with the World Wildlife Fund and other agencies—including the United Nations Environment Programme (UNEP)† since its establishment in 1972–3.

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* *See* the account, by Patricia A. Bliss-Guest & Dr Stjepan Keckes, published in our last Spring issue (*Environmental Conservation*, **9**(1), pp. 43–9, 1982). The World Charter for Nature is printed on pp. 67–8 of this issue.—Ed.

** *See* the following detailed paper on 'IUCN in Retrospect and Prospect', by its outgoing Director-General, Dr Lee M. Talbot.—Ed.

† Our collaborators also, and especially featured in our Spring issue of last year.—Ed.

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Changes During the Last Two Decades

During the decades of the 1960s and 1970s, many things happened in the international environmental movement. The 1960s saw the establishment of a solid scientific basis for the environmental movement as a whole. Take the year 1968, for example: in that year the International Biological Programme (IBP) was approaching its zenith, having already collected and accumulated a considerable wealth of information on the environment and on the ecology of natural systems, and having set the stage for concern with the environment as a whole.* In 1968, too, the International Council of Scientific Unions (ICSU) established its own top-level Scientific Committee on Problems of the Environment (SCOPE). This demonstrated the awareness of the scientific community in its higher echelons (represented by ICSU) of the fact that the problems of environment had become so important that they merited the establishment of a special international committee to be concerned with them. In 1968, furthermore, UNESCO started the initiation of studies and plans for what became, in the very early 1970s, the UNESCO-sponsored international programme on Man and the Biosphere.** It was also in 1968 that the UN General Assembly recognized the problems of the environment and decided that it would hold the UN Conference on the Human Environment in Stockholm in 1972.

Already a few years prior to this period of the 1960s there had been a change in the basis and thrust of the conservation movement as a whole, such that the International Union for Conservation (formerly 'Protection') of Nature added to its name the words 'and Natural Resources', thus becoming the International Union for Conservation of Nature and Natural Resources. This demonstrated the perception of the fact that there is compatibility between conservation of Nature and the maintenance of the value of natural resources.

As a result of the groundwork laid especially in the 1960s, by the advent of the 1970s the world was ready for action—ready to be committed to action stemming from environmental concern, and to accept and give support to the world environmental movement. Meanwhile we had moved from the concept of protection—especially of endangered species of plants and animals—to the concept of conservation, which is a much broader concept than that of protection as it involves not only the protection of species and their habitats but also the safeguarding of human requirements.

In the late 1970s our thinking began to develop further in the manner expressed in IUCN/UNEP/WWF's World Conservation Strategy of 1980,† in which conservation thinking and the movement itself advanced a big step further by talking about sustainable development and so indicating that the conservation movement is concerned for Man as a species that could be endangered. This means caring for Man and his future in regard to his relationship with the resource-base upon which his life is dependent, and also sustaining the life-support systems that provide him with all needs. Following this concept, presented most forcibly by the World Conservation Strategy, we need to safeguard all species of plants and animals; we need to safeguard all types of ecosystems; and we need to safeguard all the basic ecological processes that are involved in maintaining The Biosphere. Moreover we do so for the benefit of Man, for there is no controversy between protection of all these systems and bodies and the long-term interests of Man.

By these natural and proper means I think we are persuading, or have already persuaded, more and more groups of governments and communities of people that conservation is not a mere hobby or the purview of personal interests of individual amateurs any more than it is that of 'ecofreaks'. Instead it is a humanitarian movement caring for the future of Man—the long-term future of Man and the responsibility of Man who lives today towards generations of his progeny that are yet to be born. At the same time—always, and for some of us primarily—conservation has the responsibility of maintaining all that the world can retain of the heritage of wild nature.

Key Issues in the Years Ahead

As I see it, the key issues in the years ahead of us stem from the very complex interrelationships between Man and The Biosphere in which he lives and of which he constitutes an integral part. To understand

* *See* the account by its Scientific Director, Dr E. Barton Worthington, in his paper 'The Ecological Century', published in our Spring issue of last year (*Environmental Conservation*, **9**(1), pp. 65–70, 1982).

** *See* the account by Dr Michel Batisse, entitled 'The Relevance of MAB', published in *Environmental Conservation*, **7**(3), pp. 179–84.

† *See* Dr Lee M. Talbot's 'The World Conservation Strategy', published in our Winter issue of 1980 (*Environmental Conservation*, **7**(4). pp. 259–68, 1980), and Professor Clement A. Tisdell's 'An Economist's Critique of the World Conservation Strategy, with Examples from the Australian Experience', published on pp. 43–52 of this issue.—Ed.

this multidimensional relationship, we need to think in terms of three interactive systems. First and overall we have The Biosphere—the natural system, including all the plants, animals, soils, air, rocks, seas, and lakes and rivers—indeed the whole biotic and physical background in which we live and from which we derive our needs. This system is controlled by natural forces and processes that can be modified by Man mainly at a micro-level, being normally beyond the control of Man at the macro-level. These natural forces and processes have a time-limit and -scale much longer than Man's. This system was here before Man and will surely remain after Man.

The second system is what may be called the 'technosphere'. This includes the things that Mankind has built within the space of The Biosphere—the technologies used, the urban centres established, the industries, the roads, the bridges, the airports, the ports, the cars, the transport systems—all that is man-made. These are artificial things and their production and operation are under Man's control. Man can turn the light on or off, just as he can turn the air-conditioner on or off and stop transports from moving. But although they are usually under the control of Man, these things can have an impact on the natural systems that comprise The Biosphere.

A third system is what I call the 'sociosphere'. This is the system by which Man, living in a society, manages the relationship between himself, The Biosphere, and the technosphere, being the social and political systems by which the society governs itself and also governs its relationships with Nature. This comprises the socio-political system, the socio-economic system, and the socio-cultural system, that are all prevalent in a community. We should note that the sociosphere components are all man-made but have different time-scales, because we have inherited in our human society many of the other components of the sociosphere—such as our particular religion, our constitution, our beliefs, and our cultural system which has developed through history. These three systems—The Biosphere, the technosphere, and the sociosphere—interact. And as they interact, each of them is controlled by different systems and within different time-scales of interaction—hence the extreme complexity of our modern life in The Biosphere.

All the environmental problems that humans face in the world result from some failure of the interactions between one of the above three systems and the others. Either we are using the wrong technological means vis-à-vis the given biospheric or ecological conditions, or there are socio-cultural constraints; alternatively we may be using or applying the wrong socio-management system in regard to The Biosphere. This is very easy to say but very complicated to elucidate, such that I think we shall need, in the years ahead, to come to understand further the complexity of the interaction between these three systems, because it is only through this understanding—through the scientific and objective understanding of these complex interactions—that we shall be able to resolve many of the problems which we face. Indeed many environmental problems are not just technological problems but, rather, socio-political. And I believe that the process of development is synonymous with being a society with the right type of sociosphere—with the right kind of socio-political system—that would enable the society to manage its relationship through technology within The Biosphere in a healthy and sustained manner even in the face of continuingly rising human population-pressures.

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